

1 **STATE OF NEW HAMPSHIRE**
2 **SITE EVALUATION COMMITTEE**
3 **DOCKET NO. 2015-06**
4 **APPLICATION OF NORTHERN PASS TRANSMISSION, LLC**
5
6 **PRE-FILED DIRECT TESTIMONY OF STEPHAN T. NIX**
7
8 **IN SUPPORT OF**
9 **BRAD AND DARYL THOMPSON ABUTTING INTERVENORS**

10
11 **December 30, 2016**
12

13 **Q. Please state your name, title and business address.**

14 A. Stephan T. Nix, Licensed Land Surveyor and Attorney at Law. Business Address is 25
15 Country Club Road, Suite 502, Gilford, NH 03249.

16 **Q. Briefly summarize your educational background and work experience.**

17 A. I hold a Bachelor of Science Degree from the University of New Hampshire and a Juris
18 Doctor Degree from the UNH School of Law (previously known as Franklin Pierce Law Center).
19 I am a licensed land surveyor in New Hampshire (1986) and Maine (1990). I am licensed to
20 practice law in New Hampshire. I previously held licenses in New Hampshire as a designer of
21 subsurface disposal systems (septic systems) and an installer of septic systems. I previously held
22 certifications from the America Welding Society as a certified weld inspector in visual,
23 ultrasonic and x-ray.

24 My work experience included working for a year as weld inspector for Transeastern
25 Inspection as a subcontractor to the Federal Government on the Fort McHenry Tunnel project in
26 Port Deposit, Maryland. Work included visual, x-ray and ultrasonic weld inspection and survey
27 crew layout inspection of steel tunnel sections. Reading and understanding complex design
28 plans was an integral part of the work.

29 From approximately 1981 to 1986 I worked as a surveying and engineering technician for
30 civil engineering firms in New Hampshire. Projects included residential subdivisions; road,
31 drainage and utility design; commercial site plan design; boundary research; data reduction and

1 presentations to governmental agencies. The work included onsite road and utility layout and
2 inspection during construction. In 1986 I became licensed as a land surveyor and became the
3 manager of a civil engineering firm that had up to 25 employees. Projects included residential
4 and commercial development; municipal civil engineering and surveying; design and permitting
5 of gravel pits; design permitting, stakeout and inspection of road construction; design stakeout
6 and inspection of utilities including sewer, electric, telephone, cable and drainage structures;
7 environmental permitting; and associated governmental permitting. Preparation, review,
8 submittal of plans and applications to local, state and federal authorities was an integral part of
9 the work. In 1994, I started law school, graduating in 1997, and passing the New Hampshire Bar
10 in 1997. I worked for a law firm in Laconia for three year concentrating on land use,
11 environmental and business law. In 2000 I formed my own firm and continue to concentrate in
12 land use and development, construction law, business law and environmental law. My practice
13 includes continued consulting as a land surveyor on complex residential and commercial
14 developments, disputes and permitting.

15 **Q. Have you previously testified before the Site Evaluation Committee or other**
16 **regulatory bodies?**

17 A. I have not testified before the Site Evaluation Committee but have testified before
18 numerous local and state regulatory bodies for the purposes of permitting the projects the types
19 of projects that I mentioned in my experience.

20 **Q. What is the purpose of your testimony?**

21 A. On behalf of Brad and Daryl Thompson, abutting intervenors, I was asked to the review
22 the issues surrounding the Northern Pass Transmission Project (“Project”) submitted by Northern
23 Pass Transmission and Eversource Energy (the “Applicants”) regarding the proposal for
24 Underground Transmission Lines (“UGTL”) buried in local and state highways. My review is
25 focused upon the municipal highways but many of my observations also apply to the state
26 highways.

27 **Q. What did you review in preparation for this testimony?**

28 A. I reviewed the material regarding Site Evaluation Committee (“SEC”) Docket No. 2015-
29 06 available online; several pleadings and orders regarding the matter of *Society for the*
30 *Protection of New Hampshire Forests v. Norther Pass Transmission LLC*, Coos Co. Sup. Ct.
31 Docket 214-2015-CV-00114; New Hampshire statutes, case law and administrative rules;

1 information available on the Applicants' web site regarding the project; miscellaneous research
2 on burying high voltage DC transmission lines; available video and aerial photographs of the site
3 and other miscellaneous information. Additionally, I reviewed deeds and plans on record at the
4 Coos County Registry of Deeds.

5 **Q. What are your conclusions regarding the Applicants' application to the SEC**
6 **regarding burying the transmission lines in local roads?**

7 A. In reviewing the document at [http://www.nhsec.nh.gov/projects/2015-06/letter-memos-](http://www.nhsec.nh.gov/projects/2015-06/letter-memos-correspondance/dec-dot-response/2015-06_2016-11-30_dot_maps.pdf)
8 [correspondance/dec-dot-response/2015-06_2016-11-30_dot_maps.pdf](http://www.nhsec.nh.gov/projects/2015-06/letter-memos-correspondance/dec-dot-response/2015-06_2016-11-30_dot_maps.pdf) it was immediately
9 obvious that the plans submitted to the SEC are insufficient for the SEC to make an informed
10 decision regarding the Project. On Sheet NRTHG001, in the "Survey Notes" section, Note 5
11 states "a survey control baseline was established by BL Companies, utilizing a combination of
12 GPS and conventional land surveying along the project corridor. Horizontal control was tied
13 into the New Hampshire state plane coordinate System NAD 83, (Zone 2800, US survey foot).
14 The order of accuracy of the control survey is second order, class II. Research was conducted at
15 multiple town, county and state offices to obtain right-of-way information, highway layouts,
16 property owner information, current deeds and any filed plans for properties along the project
17 corridor. Roadway right-of-way lines have been established from available documents, such as
18 record layouts and highway plans, and the boundary evidence recovered and field surveyed along
19 the project corridor. Adjacent owner property lines have been compiled and depicted from tax
20 assessor information, recorded deeds, and the surveyed field evidence."

21 This note indicates that the surveyor of record did not perform a boundary survey of the
22 public rights of way that meets the requirements of the New Hampshire Board of Licensure for
23 Surveyors administrative rules Lan 502 and 503. The boundary information depicted on the
24 plans is insufficient for the following reasons (not an exclusive list):

25 1) NPT has not provided information required under SEC rule Site 301.03 regarding proof
26 of the legal right to construct the transmission lines within municipal highways. Specifically,
27 NPT has failed to provide sufficient evidence that the roads they are proposing to install the
28 UGTL in are public highways or the width of public easements that may exist.

29 2) NPT has not provided information required under SEC rule Site 301.03 regarding proof
30 of the legal right to install the UGTL without trespassing on abutting private property owners;

31 and

1 4) NPT has also failed to make application to the local boards of selectmen as required
2 under RSA 231:159 – 182.

3
4 **Q. Please explain the deficiencies.**

5 NPT has not provided information required under SEC rule Site 301.03 regarding proof
6 of the legal right to construct the transmission lines within municipal highways. Specifically,
7 NPT has failed to provide sufficient evidence that the roads they are proposing to install the
8 UGTL in are public highways. The N.H. Site Evaluation Committee (“SEC”) administrative rule
9 Site 301.03 (c)(6),a requires that the Applicant provide “evidence that the applicant has a current
10 right, an option or other legal basis to acquire the right to construct, operate, and maintain the
11 facility on, over, or under the site.” The rules go onto require specific information in the form of
12 documents showing fee ownership, ground lease, easement or another contractual right or
13 interest. The contractual interest can be in the form of a license, permit, easement, or other
14 permission from a federal, state or local government agency. As an alternative to providing the
15 actual license or permit, an application may provide the application for the license or permit in
16 the SEC filing.

17 NPT has failed to provide any document as evidence that the proposed routes are within
18 municipal highways. In New Hampshire, under RSA 229:1, public highways are created in four
19 ways: (1)highways laid out in the mode prescribed therefor by statute, or (2) roads which have
20 been constructed for public travel over land which has been conveyed to a city or town or to the
21 state by deed of a fee or easement interest, or (3) roads which have been dedicated to the public
22 use and accepted by the municipality, or (4) prescriptive roads, being roads which have been
23 used for public travel for 20 years prior to January 1, 1968.

24 NPT’s application plans fails to provide any supporting documentary evidence that the
25 roads that they claim are town roads are in fact public highways. The NPT application is devoid
26 of any evidence, but for the unsupported statements by NPT and Note #5, that the proposed roads
27 are public highways. By their letter dated November 20, 2015, NPT provided the SEC with
28 documents purporting to show ownership rights in private lands, but failed to provide any
29 documents establishing that the roads are public.

30
31 **Q. Would you please explain in greater detail how a road is determined to be public?**

1 A. The location of a public highway easement is a division of property rights between the
2 abutting private property owner and the public rights. As a regular part of their professional
3 responsibility, licensed land surveyors identify and map highways. Determining whether a road
4 is in fact a public highway, and its location on the ground, is a factually driven exercise that
5 requires a detailed analysis of the facts and circumstances of each particular road. Many times
6 different portions of the road may have become public ways through differing methods. The task
7 involves an extensive search of local, county and state records, registry of deeds and probate
8 records, historical maps and treatises and an on the ground survey to identify and map physical
9 evidence that impacts the determination of existence, location, width and other details regarding
10 the road.

11 Many times documents proving layout by statute under RSA 231:8 or a formal dedication
12 and acceptance cannot be found. In that case, extensive research needs to be performed to
13 provide evidence that the road in question was used by the public for a period for 20 years before
14 January 1, 1968. This requires evidence showing public use back to January of 1948 or before.
15 This is many times difficult to accomplish.

16
17 **Q. If there are no records of layout what is the process to determine that a road is**
18 **public?**

19 A. The process requires the accumulation of evidence and a determination by the Superior
20 Court that the road is a public highway. In *Gordon v. Town of Rye*, 162 N.H. 144 (2010), the
21 selectmen in Rye made a determination that a road was a public highway by prescription. Their
22 decision was appealed and the Supreme Court determined that the superior court, not the
23 selectmen, has jurisdiction to determine whether a road is public by prescription. Likewise,
24 even if there is a document that provides evidence of a layout, because the issue of property
25 rights, if there is a dispute regarding the document or its meaning, the superior court has
26 jurisdiction to settle the matter.

27
28 **Q. May the SEC or NPT unilaterally declare that a road is public?**

29 A. No. Neither the SEC nor NPT has the unilateral authority to declare that a road is a
30 public highway.

1 **Q. Would you explain in greater detail what you observed about NPT's determination**
2 **of the public highway?**

3 A. As cited above, Note #5 states that the NPT surveyors state that they performed research
4 but do not provide any of the information. The Plans themselves appear to rely heavily upon the
5 local tax maps and GIS sources to determine the property lines on the plans. It is a basic tenant
6 of the practice of land surveying that tax maps and GIS sources should not be relied upon for the
7 determination of property boundaries. Tax maps and GIS data bases are compiled from pre-
8 existing public information with each contributing data source having unknown precision and
9 accuracy. Tax mapping and GIS systems then manipulate the data through translation and
10 rotations to create a "best fit" overlay data base. Any deficiency or differences in the underlying
11 data are modified and magnified during the compilation process.
12 There are many private property surveys abutting the roads that are not reflected on the NPT
13 plans.

14
15 **Q. Are there other issues with the road easements depicted on the plan?**

16 A. The NPT Application plans do not provide supporting evidence for their representation of
17 the limits of the public rights of way. The plan view road plans depict a right of way but do not
18 provide supporting evidence of the width. These right of way easement limits appear to be
19 based completely upon an assumption of width. The plans depict the right of way line running
20 through several abutting structures indicating a conflict of property rights.

21 If a particular road or road section is determined to be a public highway by prescription,
22 the width of the public rights may not support the proposed underground transmission lines and
23 construction. In *Hoban v. Bucklin*, 88 N.H. 73 (1936), the Supreme Court held that the width of
24 a prescriptive highway is determined by the "width [that] has in fact been taken, both for actual
25 travel, and, as incidental thereto, for the safety, convenience, and maintenance of the traveled
26 part." Similar to the determination of whether the road is in fact public, the determination of the
27 width of highways is a factual issue for the superior court to decide.

28 The plans are also deficient as follows (not an exclusive list):

- 29 • Lacking mathematical metes and bounds and dimensions for the widths;
- 30 • Lacking identification of abutting surveys and mathematical ties to those surveys;

- Lacks reconciliation between existing surveys and deed descriptions with field evidence;
- Conflicts between boundary monuments such as iron pipes found in the field and the purported location and width of the rights of way lines;
- Conflicts between existing fence lines and stone walls and the purported location and width of the rights of way lines;
- The municipal boundaries lack evidence of field mapping and location; and
- Monuments found and depicted on the plans are not mathematically tied to the boundary or proposed project; and
- The proposed underground route passes by cemeteries that are not adequately field mapped depicted on the Plans. RSA 289:3, III precludes new construction or excavation within 25' of the boundaries of a cemetery. The construction of the UGTL is new construction under the road. The locations of the cemeteries, combined with the unknown width of the rights of way, are critical factors as to whether the proposed UGTL will physically fit in the roads.

Q. Are there other design and construction issues with the plans?

A. Yes. The following items are design and construction issues (not an exclusive list):

- The proposed depth of the UGTL at a minimum of 30" will preclude or compromise the future ability of the municipality to install new culverts under the road. The UGTL as designed will force the municipality to either bury the culverts below the UGTL, which will in most cases eliminate their usefulness; or the new culverts must be constructed above the UGTL in the frost zone. Installing culverts in the frost zone causes heaving and road damage. It should be noted that NPT is aware of this issue as where there is an existing cross culvert the UGTL is designed to diverge from the standard depth and be buried below the culvert.

- 1 • The proposed cross sections and notes indicate that the post construction of the UGTL
2 will not include repaving of the entire width of the existing pavement. Tying in a long
3 narrow strip of pavement with the existing road pavement causes premature failure of the
4 paved surface during freeze thaw cycles and heavy use and is an undesirable construction
5 mitigation technique.
- 6 • The application fails to address the safety of other authorized underground users of the
7 roads. How will the municipality and other authorized users of the road safely maintain,
8 replace and install subsurface drainage, conduits and pipes?
- 9 • The application fails to address who will pay for the relocation of portions of the UGTL
10 if the roads are moved or other physical issues arise during maintenance and construction
11 of the roads.
- 12 •

13 **Q. Are there permitting issues that you have identified with NPT application?**

14 A. Yes. NPT failed to make application under RSA 231:60, et seq., to the
15 municipalities for licenses to install the UGTL in municipal roads and therefore does not meet
16 the requirements of Site 301.03 regarding proof of the legal right to construct the transmission
17 lines. It is my understanding that NPT is arguing that in the 1980 case of *Public Service*
18 *Company of New Hampshire v. Town of Hampton*, 120 N.H. 68 that the SEC has exclusive
19 jurisdiction to review the installation of the UGTL in the local roads. However, in the 1988 case
20 of *Town of Rye, et al. v. Public Service Co. of N.H.*, 130 N.H. 365 (1988), PSNH applied for
21 licenses to the Town of Rye to install evacuation sirens on poles located in the town's right of
22 ways. The application was filed in 1984, four years after the *Hampton* case. The selectmen
23 granted the licenses but later revoked them. The lower court upheld the revocation based upon

1 the theory that sirens were not utilities under RSA 231:160. The Supreme Court overturned the
2 lower court finding that the sirens were attachments to the poles as allowed under the statute.
3 The Supreme Court also said that the selectmen lack authority to revoke the licenses they granted
4 to PSNH, or to deny applications for licenses to erect three siren poles on town-maintained
5 highways, for any reason other than a reason relating to "the safe, free and convenient use for
6 public travel of the highway." The determination of safe, free and convenient use of the public
7 travel is the criterion for the exercise of the selectmen's authority under RSA 231:168. *Rye* is not
8 in conflict with the findings in *Hampton*. In *Hampton* the Court stated that "whatever power
9 towns may have to regulate the location of transmission lines within their borders, that power
10 cannot be exercised in a way that is inconsistent with State law." The Court found in *Rye* that
11 the selectmen retain jurisdiction to review SEC approved utility license applications and set
12 conditions so as not to interfere with the "safe, free and convenient use for public travel of the
13 highway. "

14 **Q. Are there any other issues regarding the UGTL in local roads that you see?**

15 A. Yes. There is a question as to whether this proposal for the installation of miles of
16 concrete encased high voltage transmissions lines with large concrete splice pits every 1,600' +/-
17 is an overburdening of the public road rights of way. The sheer physical magnitude and location
18 within 30" of the road surface raises questions of whether the primary purpose of the local road
19 public easement is being shifted from transportation purposes to the private purpose of electricity
20 transmission for sale in far reaching regions. The question of the magnitude of the utility project
21 overburdens a local road easement a question of first impression in New Hampshire. The New
22 Hampshire Supreme Court found that using public highway easements for utilities is included in
23 the public easement (*See Opinion of the Justices*, 101 N.H. 527 (1957)). However, the design

1 magnitude and future impacts on the municipality to maintain and repair its roads with a high
2 voltage power line buried at only 30” deep raises the issue of whether the UGTL has become the
3 principal use of the roads. Additionally, abutting property owners with property on both sides of
4 the road will be impacted in their ability to install their own underground conduits and pipes as
5 would otherwise be within their rights raising the question of whether this use amounts to
6 additional taking of private property. Several of the abutting property owners have granted
7 conservation easements on their properties. Because these easements are designed to retain the
8 encumbered properties in the natural state, the abutting property owners will rely upon their
9 rights to use the roads for the installation of their private utilities, pipes and conduits. The
10 magnitude of the UGTL construction will conflict with these private rights.

11 **Q. Does this conclude your testimony?**

12 A. Yes, with the exception of reserving the right to amend and respond to additional
13 information that becomes available.

Stephan T. Nix, Esq., LLS
25 Country Club Road
Suite 502
Gilford, NH 03249
603-524-4963

CURRICULUM VITAE
December, 2016

Education:

- J.D. UNH School of Law (f/k/a Franklin Pierce Law Center)
- B.S. degree, cum laude, University of New Hampshire
- Post graduate course work in mechanical engineering at the University of New Hampshire and Oceanographic technology at Florida Institute of Technology.

Professional Licenses:

- Admitted to N.H. Supreme Court and U.S. District Court, 1997.
- Licensed Land Surveyor, New Hampshire
- Registered Land Surveyor, Maine.
- Licensed Septic Designer, New Hampshire (inactive)
- Title Insurance Agent, CATIC

Experience:

Sept. 2000 to present:

Independent Attorney and Land Surveyor.

Nov. 1997 to Sept. 2000:

Associate attorney with Martin, Lord & Osman, P.A.,
Laconia, N.H. concentrating practice in boundary, land use and
environmental law.

1994 - 1997:

Stephan T. Nix, Land Surveyor, Gilford, N.H.
Sole Proprietor of land surveying consulting business.

1986 - 1994:

White Mountain Design Group, Inc.
General Manager and Chief Surveyor of civil engineering and land
surveying firm.

1983 - 1986:

Bryan L. Bailey Associates, Inc.
Project manager and land surveyor.

1 Publications:

2
3 New Hampshire Rangeways, 42 NHBJ 44 (Dec. 2001).

4
5 Contributor to: H. Bernard Waugh, Jr. (NHMA), A Hard Road to Travel,
6 Ch. 2.IV, (1997 ed.)

7
8 Robert G. Moynihan, (UNH Thompson School), A Manual on Municipal
9 Boundaries, Ch IV, A Review of N.H. Law Relating to Municipal Boundaries,
10 (1st. ed. 2003)

11
12 Assistant Editor of New Hampshire Land Use treatise published by Martin,
13 Lord & Osman, P.A., 1997.

14
15 Organizations, Special Projects and Skills:

16
17 Member New Hampshire Land Surveyors Association – Fellow Member
18 - Past chairman of legislative committee.
19 - Past Director and Editor of Benchmark.

20 Member New Hampshire Bar Association (Real Property and Probate Section).

21 Member Town of Gilford Land Conservation Task Force and ZBA.

22 County of Belknap, Gunstock Recreation Area Commissioner.

23 Former Member and Treasurer of the Laconia Area Community Land Trust.

24 Adjunct Professor, University of New Hampshire, Thompson School of
25 Applied Sciences. Legal Aspects of Development and Land Surveying.
26 Fall 1998.

27 Ad Hoc Committee on Soil Based Lot Sizing (N.H.D.E.S. and U.S.E.P.A.).

28 Guest Lecturer on land boundaries, road and access law, property titles, boundary
29 litigation, zoning and planning, governmental permitting, littoral and riparian
30 rights, condominium law, easement law; historical title research and related topics
31 for:

- 32
33 - New Hampshire Bar Association;
34 - New Hampshire Land Surveyor's Association
35 - Vermont Land Surveyor's Association
36 - Univ. of N.H. School for Life Long Learning
37 - N.H. Municipal Association
38 - UNH Coop Ext., et al, Saving Special Places;
39 - CATIC legal continuing education series
40 - National Business Institute Seminar;